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ABSTRACT

Findings of a study that examined the extent to which transformational forms of leadership contribute to teacher commitment are presented in this paper. Teachers' commitment to change is expressed as a function of personal goals, two types of personal agency beliefs, and emotional arousal processes. Alterable variables giving rise to commitment are conceptualized as a set of eight in-school and out-of-school conditions as well as seven dimensions of transformational leadership practices. Data were derived from a survey of 168 teachers (of whom 91 percent were involved in implementing school improvement efforts) in 9 secondary schools in a large urban school district. Path analysis was used to generate three models. Findings indicate that each class of variables appeared to exercise a significant influence on teachers' commitment. Vision-creating and goal consensus-building practices of school leaders had especially strong effects on motivational conditions associated with teachers' personal goals, which, in turn, were significantly related to teachers' context and capacity beliefs. In summary, the dimensions of leadership practice that contributed most to teachers' commitment to change were those that helped to give direction, purpose, and meaning to teachers' work. Four figures and four tables are included. (Contains 68 references.) (LMI)

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Secondary School Teachers' Commitment to Change: The Contributions of Transformational Leadership

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Secondary School Teachers' Commitment to Change:
The Contributions of Transformational Leadership

This may be a study of school "restructuring" and the extent to which a particular form of leadership is helpful to the process. Then again, maybe not! It all depends on how we define restructuring. To count as restructuring in Conley's terms (cited in Goldman et al, 1993), would require changes: to the core technology of a school; to the occupational conditions of teaching (more professionalization and accountability); to the school's authority and decision-making structures; and to relationships between the school's staffs and its clients. Corbett's (1990) definition requires changed patterns of rules, roles, relationships and results; anything less doesn't count. This is not a study of restructuring strictly defined in either of these ways.

But restructuring is also defined, more generically, as effecting a fundamental change in, for example, an organization or system (Random House Dictionary, 1987). We think our study qualifies in these terms. The fundamental change, serving as the dependent variable in our study, was secondary school teachers' commitment to change. A focus on such commitment is consistent with the evolution of the change literature over the past twenty years. As Fullan (1992) describes it, this evolution began with a relatively narrow preoccupation over the implementation of single innovations, moved through a brief period of concern for how multiple innovations could be managed and on to questions about how "the basic capacity to deal with change" (p. 113) can be developed. This contemporary interest in capacity building acknowledges the continuous nature of demands for school change. It also reflects an appreciation for increases in the rates of change now expected of our educational institutions (e.g., Schlecty, 1990).

The choice of teacher *commitment* as a key aspect of the school's capacity for change is the result of insights hard-wrung from the experience of innovation failure dating back to the 1960's. Reflecting on these insights, Barry MacDonald concludes:

> It is the quality of the teachers themselves and the nature of their commitment to change that determines the quality of teaching and the quality of school improvement. (1991, p. 3)

Furthermore, this study focused on *secondary* school teachers' commitment because of widespread professional and public demands for change especially in secondary schools (e.g., Firestone, Fuhrman & Kirst, 1990; Radwanski, 1987) along with the relatively meagre literature available, as Louis and Miles (1990) have noted, to inform the process.

Evidence suggests that teacher commitment is a function, in part, of factors that are hard (if not impossible) to change - for example, teachers' age, gender and length of teaching experience (Kushman, 1992). This is the bad news for those who would intervene to increase commitment. The good news is that other, more alterable variables also seem to significantly influence levels of teacher commitment. Examples of such variables include teachers' decision-making power in the school, parental involvement in the school and the school's climate (Smylie, 1990). Of particular interest in this study was the influence of school leadership on teacher commitment; more specifically, the extent to which transformational forms of leadership contribute to teacher commitment. Empirical evidence, most collected in non-school organizations, has demonstrated the impact of such leadership on organizational members' willingness to exert extra effort (e.g., Crookall, 1989; Deluga, 1991; Seltzer & Bass, 1990) and most likely on their sense of self-efficacy, as well (Shamir, 1991). Both these psychological states are closely related to commitment.

Framework

Figure 1 identifies the categories of variables (constructs) and relationships used in this study to explain teachers' commitment to change. Only alterable variables are included in this model and primary interest was in the relationship between transformational school leadership and commitment. However, the model acknowledges that this relationship may be both direct and indirect; it also acknowledges that alterable variables other than leadership (called "in-school" and "out-of-school" conditions) potentially mediate the effects of leadership and, as well, have their own direct effects on teacher commitment. In the remainder of this section we unpack the meaning of each of these constructs.

[Insert Figure 1 here]

Teachers' Commitment to Change

Kushman (1992) contends that teacher commitment is central to school reform yet little is known about it and it remains an inherently ambiguous concept. Commitment and the closely related concept of engagement are often viewed as different psychological states and several forms of each have been identified. Teachers, it is claimed, may demonstrate commitment to their schools (organizational commitment) as well as commitment to student learning. These are forms of commitment which may have different causes and consequences (Kushman, 1992; Rosenholtz, 1989). Organizational commitment is typically defined as (a) a strong belief in the organization's goals and values, (b) willingness to exert effort for the organization, and (c) a strong desire to remain a part of the organization (e.g., Mowday, Steers & Porter, 1979; Reyes, 1990). Definitions of commitment to student learning, on the other hand, typically encompass (a) feelings of self-efficacy on the part of a teacher, (b) expectations that students will learn, and (c) a willingness to devote needed effort to ensure such learning (Kushman, 1992). Teacher engagement, Louis and Smith (1991) claim, is of four distinctive types: engagement with the school as a social unit, with the academic goals of the school, with students and with the discipline or teaching assignment. These forms of engagement appear to fall within the two broader categories of commitment already described.

In this study, we conceptualized the different forms of both commitment and engagement as elements of a more fundamental underlying psychological state, motivation. Comprehensive theories of motivation, in particular, those of Ford (1992) and Bandura (1986), predict most of the causes and consequences of teacher commitment and engagement identified in recent empirical research - and more. Motivational processes, according to Ford (1992), are qualities of a person oriented toward the future and aimed at helping the person evaluate the need for change or action. These processes are a function of one's personal goals, beliefs about one's capacities, beliefs about one's context and emotional arousal processes. We consider each of these elements of motivation in more depth below. Those conditions, associated with each element, likely to help foster teachers' commitment to change are identified.

Personal Goals. Personal goals represent desired future states (aspirations, needs, wants) that have been internalized by an individual (e.g., a teacher's desire for a manageable class). The term "personal" is significant. School staffs set goals for

their improvement efforts, for example. But such goals do not influence the actions of individual teachers and administrators until they make them their own and goal-setting activities in schools often fail to accomplish this internalization. In such cases, the resulting goals have little meaning to teachers and often cannot be remembered even though they might appear prominently in written material about the school.

While personal goals are an important launching pad for motivation, they must be perceived to possess certain qualities in order actually to energize action. What are these qualities? First, goals energize action only when a person's evaluation of present circumstances indicates that it is different from the desired state. For example, a teacher who judges his class already to be well managed perceives no need to act or to change with respect to this goal. Clearly, the easiest way to avoid change is to set goals that are being accomplished already, an action (co-opting the change) not unheard of in the school improvement business (Berman and McLaughlin, 1977). Second, personal goals are more likely to energize action if they are perceived to be hard but achievable. "A more manageable class" would qualify on this count if the teacher's current class was regularly out of control for reasons the teacher believed she or he at least partly understood. Louis and Miles (1990) have reported increased likelihood of change in schools where the innovation is perceived to be challenging but "do-able".

To energize action, third, it also helps if goals are perceived to be clear and concrete: "developing a more manageable class" is probably not as motivating as "reducing the time wasted in making transitions from one activity to another". This is the case because what teachers need to do is much more evident to them. The goal almost specifies the action to be taken. Finally, goals are more likely to be energizing when they are proximate or short term but understood within the context of longer term and, perhaps more important, more obviously valuable goals ("This week I will try to keep the transition from reading to math under three minutes as a start toward a more manageable class"). As Ford points out, highly motivating goals often result from:

> ... goal setting techniques that emphasize .. constant improvement toward explicitly defined goals that are more challenging than current levels of achievement or productivity, but also well within reach if effort and commitment are maintained. (1992, p. iii)

These energizing qualities of personal goals are independent of the specific content of those goals. And the number and nature of personal goals, in terms of

content, is enormous (for example, see Ford's, 1992, 24 categories of such goals). Such acknowledgement casts a different light on the two types of teacher commitment studied by Kushman (1992) and the four forms of teacher engagement described by Louis and Smith (1991). These types and forms of commitment and engagement can be viewed as different content goals. Construed in this way, it seems likely that teachers have many more types and forms of professional commitment and engagement of consequence than the empirical literature has so far inquired about. As a consequence, teachers may be committed to or engaged by many more aspects of their work environment than have been considered by relevant research to this point.

In sum, motivational theory redefines the objects of teacher commitment and engagement (e.g., to the school, to student learning, to one's discipline) as personal goals. It also identifies conditions that must prevail if such goals, or different forms of commitment and engagement, are to energize action toward school change. These conditions include:

- Adoption, as personal goals, of at least a significant proportion of the goals adopted by the school's change initiatives. Commitment to such initiatives will depend, in part, on the teacher's perception of compatibility between personal goals and the school's goals for change. Louis and Smith (1991) identify such congruence as an indicator of the quality of work life influencing levels of teacher engagement with their work.
- An appreciation by teachers of a significant gap between their current practices and those implied by the changes being proposed within their schools.
- A perception, on the part of teachers, that participating in the school's change initiative is a significant but achievable challenge. Shedd and Bacharach (1991) argue that teaching provides intrinsic motivation under those restructuring initiatives which conceptualize teaching as a highly complex act and help teachers significantly expand their technical repertoires and their capacities to apply them reflectively and constructively. Contributing to the perception of a goal's achievability are opportunities to learn more about how the goal can be accomplished (Kushman, 1992; Reyes, 1990; Rosenholtz, 1989).
- A perception by teachers that they know, specifically and concretely, what they will need to do (or that such specificity can be developed) eventually, to implement changes being proposed for their school and classes. Both Shedd

and Bacharach (1991) and Rosenholtz (1989) identify the importance of positive, constructive feedback to teachers as one means of meeting this condition.

- A belief by teachers that they know the next manageable steps that need to be taken in their schools and classes eventually to accomplish the overall goals for change that their schools have set.

Related research has suggested that for organizational goals to become internalized by individuals, the following conditions also should be met:

- Goal-setting processes should be highly participatory. Heald-Taylor (1991) found that when school goal-setting processes met this condition, teachers developed greater understanding of and commitment to school goals.
- Goal-setting processes should be ongoing, with continuous efforts to refine and clarify the goals yet to be accomplished. Leithwood et al (1992) found that such ongoing efforts kept school goals alive in teachers' minds and contributed to a gradual increase in the meaningfulness of these goals for teachers.

Capacity Beliefs. Two sets of personal agency beliefs interact with teachers' personal goals to help determine the strength of motivation to achieve such goals. The first set, *capacity beliefs*, includes such psychological states as self-efficacy, self-confidence, academic self-concept and aspects of self-esteem. It is not enough that people have energizing goals in mind. They must also believe themselves capable of accomplishing these goals. Evidence reviewed by Bandura suggests that:

> People who see themselves as [capable or] efficacious set themselves challenges that enlist their interest and involvement in activities; they intensify their efforts when their performances fall short of their goals, make causal ascriptions for failures that support a success orientation, approach potentially threatening tasks non-anxiously, and experience little in the way of stress reactions in taxing situations. Such self-assured endeavor produces accomplishments (1986, p. 395).

Perceived capacity or self-efficacy increases the intrinsic value of effort and contributes to the possibilities for a sense of collective capability or efficacy on the part of a group, as well.

Teachers' beliefs about their own professional capacities are often eroded by taken-for-granted conditions of their work. These conditions include infrequent opportunities for teachers to receive feedback from credible colleagues about the

quality of their practices as a consequence of isolated school cultures and ineffective supervisory practices (Rosenholtz, 1989). Smylie's (1990) review of research on the consequences of teachers' beliefs about their own professional efficacy described significant relationships between such capacity beliefs and the effectiveness of classroom practices, student learning, and the likelihood of engaging in classroom and school improvement initiatives.

Increased perceptions of capacity or self-efficacy may result from teachers considering information from three sources. The most influential source is their actual performance: specifically, perceptions of success perhaps formed through feedback from others. Success raises one's appraisal of one's efficacy, although such appraisals are shaped by task difficulty, effort expended, amount of help received and other circumstances. Teachers who actually try out new practices in their classrooms, with sufficient on-site assistance to ensure success, will possess this kind of information.

Vicarious experience, a second source, is often provided by role models. However, to have a positive effect on self-efficacy, models who are similar to or only slightly higher in ability provide the most informative, comparative information for judging one's own abilities. Further, observers benefit most from seeing models ".. overcome their difficulties by determined effort rather than from observing facile performances by adept models" (Bandura, 1986, p. 404). It is also likely to be more helpful, for example, for two teachers to work as a team on implementing cooperative learning strategies, than only to have an "expert" demonstrate such strategies (such demonstrations might be especially helpful for the team part way through their struggles, however).

Finally, verbal persuasion - the expressed opinions of others about one's abilities - may enhance perceived self-efficacy. But for this to occur, persuaders must be viewed as relatively expert or at least credible judges of such expertise. A principal, vice-principal, or department head can perform this role effectively when teachers believe them to be knowledgeable about the changes being proposed in their school. Such persuasion will often take the form of evaluative feedback.

Conditions likely to give rise to positive *capacity beliefs* on the part of teachers concerning change being initiated in their schools include:

- Feelings of success in their initial efforts to implement those restructuring initiatives. These feelings may be enhanced by supportive feedback from administrators, peers and students (Smylie, 1990).

- Appropriate models for the new practices to be implemented.
- Strong encouragement from credible colleagues about their ability to master the change initiatives. This is a part of one of the quality of work life indicators that Louis and Smith (1991) found to be associated with teacher engagement - frequent and stimulating interaction among one's teaching peers in the school.

Context Beliefs. A second set of personal agency beliefs are *context beliefs*, beliefs about whether, for example, the school administration or the central office will actually provide the money and professional development that I will need, as a teacher, to "destream" my grade 9 classes. Many experienced teachers have developed negative context beliefs over their careers as a consequence of being associated with mismanaged or ill-conceived innovations (Fullan, 1991; Huberman, 1988). Such negative context beliefs easily may graft themselves onto these teachers' perceptions of current change initiatives in their schools, reducing their motivation to implement those initiatives ("this too shall pass").

Conditions giving rise to positive *context beliefs* include:

- Teachers' perceptions of an overall school culture and direction that is compatible with their personal goals and not overly controlling of what they do and when they do it (feelings of discretion). The contribution of autonomy and discretion to teachers' commitment is evident in studies by Louis and Smith (1991) and by Shedd and Bacharach (1991). Participatory forms of decision making are particularly powerful ways of exercising this discretion (Chase, 1992; Imber & Neidt, 1990; Louis & Smith, 1991; Shedd & Bacharach, 1991).
- Teachers' perceptions that their working conditions permit them to accomplish their school's change initiative and that information is available to them about the expectations of relevant others (e.g., principals, superintendents), constraints on what is possible, policies or regulations that must be considered and the like. Rosenholtz's (1989) evidence points to "teacher certainty" as an important contributor to commitment.
- Teachers' perceptions that the human and material resources that they will need to achieve their goals for change are available (Leithwood et al, 1992; Louis & Smith, 1991).

- Teachers' perceptions that the interpersonal climate of the school, provided by leaders and teaching colleagues, is a supportive, caring and trusting one. Chase (1992), for example, found that teacher engagement was positively associated with staff collegiality and solidarity, as well as perceptions of administrators as caring and concerned for staff welfare.

In sum, it is not enough for teachers to have goals compatible with their schools' change initiatives. Teachers must also believe that they are personally able to achieve those goals and that their school environments will provide the support that they require.

Emotional Arousal Process. Emotions are relatively strong feelings that are often accompanied by some physical reaction (like a faster pulse rate) - satisfaction, happiness, love and fear, for example. These feelings have motivational value when they are associated with a personal goal that is currently influencing a person's actions. Positive emotions arise when an event promises to help meet a personal goal; negative emotions when chances of achieving one's goal are harmed or threatened. Whereas capability and context beliefs are especially useful in making big decisions (e.g., "Should I actually try to use these new "benchmarks" in reporting my students' progress to their parents?"), emotions are better suited for the short term. Their main function is to create a state of "action readiness", to stimulate immediate or vigorous action by reducing the salience of other competing issues or concerns ("I'm so excited by the reaction of the students to journal keeping, which I just saw in the classroom next door, that I'm going to try it tomorrow").

Emotions also may serve to maintain patterns of action. This may be their most important function in consideration of restructuring initiatives. As teachers engage, from day to day, in efforts to restructure, those efforts will be sustained by a positive emotional climate. Conditions supporting such a climate are likely to include:

- Frequent positive feedback from parents and students about their experiences with the school's change initiatives.
- Frequent positive feedback from one's teaching colleagues and other school leaders about one's success in achieving short-term goals associated with change initiatives. This might take the form of celebrations of success and contributions to the school's efforts. It might also be a function of frequent collaboration with other staff members on matters of curriculum and instruction (Cousins, Ross & Maynes, in press; Kushman, 1992).

- A dynamic and changing job (Kushman, 1992).

Data collected in this study did not permit us to include this aspect of teachers' commitment to change in the analysis of results.

Transformational Leadership

Roberts provides a synopsis of transformational leadership as follows:

> This type of leadership offers a vision of what could be and gives a sense of purpose and meaning to those who would share that vision. It builds commitment, enthusiasm, and excitement. It creates a hope in the future and a belief that the world is knowable, understandable, and manageable. The collective action that transforming leadership generates, empowers those who participate in the process. There is hope, there is optimism, there is energy. In essence, transforming leadership is a leadership that facilitates the redefinition of a people's mission and vision, a renewal of their commitment, and the restructuring of their systems for goal accomplishment (1985, p. 1024).

Hunt (1991) traces the origins of transformational leadership, in particular the idea of charisma, to the early work of the well-known sociologist Max Weber. But transactional and transformational forms of leadership are parts of a leadership theory proposed in a mature form first by Burns (1978) and then by Bass and his associates (e.g. Bass, 1985; Bass & Avolio, 1989; Bass, Waldman, Avolio & Bebb, 1987) as well as others in non-educational contexts (e.g. Podsakoff, Todor, Grover & Huber, 1984; Podsakoff, MacKenzie, Moorman & Fetter, 1990). While systematic attempts to explore the meaning and utility of such theory in educational organizations have only recently begun (e.g., Sergiovanni, 1990; Leithwood & Jantzi, 1990; Leithwood & Steinbach, 1991), results suggest that transformational leadership practices ought to explain significant variation in teachers' commitment to change.

Linked closely to the idea of transformational leadership is the idea of transactional leadership. Transactional forms of leadership are premised on exchange theory. Various kinds of rewards from the organization are exchanged for the services of the teacher who is seen to be acting at least partly out of self-interest. Transactional leadership practices help teachers recognize what needs to be done in order to reach a desired outcome. This, it is claimed, increases teachers' confidence and enhances motivation as well.

The corpus of theory and research travelling under the transformational leadership banner is by no means unified. It offers alternative prescriptions for leader behavior, alternative predictions about the effects of such practices on

"followers" and alternative explanations of how these leader behaviors and effects are mediated (see Shamir, 1991). The conception of transformational leadership which seems most suitable for fostering teachers' commitment to change has its theoretical genesis in Bandura's (1977, 1986) social cognitive theory and Shamir's (1991) self-concept based explanation of charisma. According to this view, transformational leaders increase their staffs' commitment by "recruiting" their self-concept, by increasing the salience of certain identities and values and to an organizational vision or mission that reflects them. These transformational leadership effects can be explained as a product of conditions (discussed above) which enhance staff motivation and perceptions of self-efficacy.

Podsakoff et al (1990), reporting on the results of a comprehensive review of relevant research, suggested that almost all conceptions of transformational and transactional leadership are encompassed within eight dimensions of leadership practice. These dimensions served as points of departure for the conception of leadership used in this study. A substantial amount of evidence (e.g., Silins, 1992) caused us to treat, as transformational, one dimension of leadership practice typically considered transactional (*providing contingent rewards*). Because a second dimension of transactional leadership, *management-by-exception*, has rarely been useful in explaining variation in almost any dependent measure, it was not incorporated into our study. The remaining leadership dimensions adopted as the basis for this study are outlined below, as is their theoretical contribution to those conditions giving rise to teachers' commitment to change described in the previous section.

• *Identifying and Articulating a Vision*: Behaviour on the part of the leader aimed at identifying new opportunities for his or her school, and developing, articulating, and inspiring others with his or her vision of the future. When visions are value laden, they will lead to unconditional commitment; they also provide compelling purposes for continual professional growth.

• *Fostering the Acceptance of Group Goals*: Behaviour on the part of the leader aimed at promoting cooperation among staff and assisting them to work together toward common goals. Group goals that are ideological in nature are especially helpful in developing group identity.

These first two dimensions of transformational leadership theoretically foster teachers' commitment, primarily through their influence on personal goals: for example, encouraging the personal adoption of organizational goals, increasing goal clarity and the perception of such goals as challenging but achievable. The

inspirational nature of vision may also foster emotional arousal processes, whereas the promotion of cooperative goals may positively influence teachers' context beliefs.

• *Providing Individualized Support*: Behaviour on the part of the leader that indicates respect for staff and concern about their personal feelings and needs (verbal persuasion). This dimension is likely to influence context beliefs, assuring teachers that the problems they are likely to encounter while changing their practices will be taken seriously by those in leadership roles and efforts will be made to help them through those problems.

• *Intellectual stimulation*: Behaviour on the part of the leader that challenges staff to reexamine some of the assumptions about their work and rethink how it can be performed (a type of feedback associated with verbal persuasion). Such stimulation seems likely to draw teachers' attention to discrepancies between current and desired practices and to understand the truly challenging nature of school restructuring goals. To the extent that such stimulation creates perceptions of a dynamic and changing job for teachers, it should enhance emotional arousal processes, also.

• *Providing an Appropriate Model:* Behavior on the part of the leader that sets an example for staff to follow that is consistent with the values the leader espouses. This leadership dimension is aimed at enhancing teachers' beliefs about their own capacities, their sense of self-efficacy. Secondarily, such modelling may contribute to emotional arousal processes by creating perceptions of a dynamic and changing job.

• *High Performance Expectations:* Behavior that demonstrates the leader's expectations for excellence, quality, and high performance on the part of staff (e.g., verbal persuasion). Expectations of this sort help teachers see the challenging nature of the goals being pursued in their school. They may also sharpen teachers' perceptions of the gap between what the school aspires to and what is presently being accomplished. Done well, expressions of high expectations should also result in perceptions among teachers that what is being expected is also feasible.

• *Contingent Reward:* The school leader tells staff what to do in order to be rewarded for their efforts. This leadership dimension is viewed, theoretically, as transactional. But the possibility of providing informative feedback about performance in order to enhance teachers' capacity beliefs as well as emotional arousal processes makes this behavior potentially transforming, as well. Furthermore, some studies have found contingent reward to be as strongly associated with enhanced commitment, effort and job satisfaction as other dimensions of transformational leadership (Spangler & Braiotta, 1990; Singer, 1985).

In-School and Out-of-School Conditions

In the discussion of teachers' commitment to change (above), we noted that such commitment may arise from many more aspects of the teachers' work environment than has been considered in previous research. Leadership, although a primary focus in this study, is but one of many such aspects. To identify which other aspects of that environment to include in this study, we drew on an extensive review of empirical research. We also drew on the accumulated results of our own research underway for the past four years. This research is, in part, about conditions which foster productive school restructuring responses to provincial policy directions in the two Canadian provinces of British Columbia and Ontario (see, for example, Leithwood & Dart, 1992; Leithwood, Cousins & Gérin-Lajoie, 1993). In this section each of the eight conditions resulting from the literature review and our own research is defined and their relationship to teacher commitment indicated.

Out-of-School Conditions. Three categories of out-of school conditions emerged as important; one category associated with the state department or provincial ministry of education, one with the school system or district as a whole and one associated with the local school community:

- *Province/State:* the extent to which school staffs value the initiatives of provincial/state personnel to assist with school change and its implications for their work; and the perceived adequacy of the curriculum resources, money, personnel and other resources provided by the Ministry or state. These conditions may help teachers judge the compatibility that exists between their personal goals and the goals of relevant state/provincial policies. Such conditions may also contribute to the perception of a gap between current practices and goals viewed as more desirable. Teachers' context beliefs may be influenced substantially by perceptions of the adequacy of resources being provided from this source.
- *School District:* the degree to which staffs perceive as helpful the leadership provided by school board personnel and professional associations, school board staff development opportunities, resources and school district policy initiatives in support of school restructuring. School district conditions most directly influence teachers' context beliefs. These conditions may also assist teachers in developing a clearer understanding of the specific goals to be accomplished through their change efforts. Such conditions may create a strong professional community at the level of the school board (McLaughlin, 1992). This sense of community has been found to

positively influence teachers' commitment to the profession and to shape their morale and practices.

- *School Community:* the extent of support or opposition from parents and the wider community for school change initiatives, as perceived by staffs.

Feedback from parents and other community members influences teachers' context beliefs and contribute to emotional arousal processes. Substantial expressions of support from the community also will be helpful in sustaining the day-to-day work of teachers in their restructuring efforts by contributing to a positive emotional climate in the school.

In-School Conditions. Five categories of in-school conditions appear to be sources of variation on teachers' commitment to change. These include:

- *Goals:* the extent to which staff perceive that the goals for school change are clear and compatible with their own goals. Such perceptions are the starting points for developing commitment. The aim of school goal-setting processes is to arrive at a set of goals which adequately reflects purposes for restructuring and professional purposes which individual school staff members find personally compelling. Perceptions of goal compatibility have been found to be among the best predictors of efforts by principals to introduce externally-initiated change into their schools (Trider & Leithwood, 1988).
- *Culture:* the degree to which staff within the school perceive themselves to be collaborating in their change efforts. A collaborative culture influences teachers' context beliefs, in particular those concerning the interpersonal climate of the school - the degree to which it is supportive, caring and trusting. To the extent that collaboration is perceived as providing professional growth opportunities, teachers' capacity beliefs may also be strengthened (Peterson & Martin, 1990; Smylie, 1990). Such contributions to teachers' capacity and context beliefs help explain the positive relationships that have been reported between collaborative school cultures and school effects (Cousins et al, in press; Little, 1982; Rosenholtz, 1985; Saphier & King, 1985).
- *Programs and Instruction:* the extent to which changes being proposed are perceived to be compatible with teachers' views of appropriate programs and instruction and the priority given by teachers to school change. Teachers' perceptions about this component of the school and its relation to change initiatives may be part of the process of refining teachers' personal goals: becoming clearer about the nature of the gap that might exist between what is being accomplished and

what ought to be accomplished, and judging the personal achievability of school change initiatives.

- *Policy and Organization:* the extent to which staff perceive school policies and organization to support their change efforts. This component of the school potentially has a major influence on teachers' beliefs about whether the context for change in their schools will actually support their efforts.
- *Resources:* the extent to which staff perceive as adequate for school change initiatives the financial and material resources available to them. Judgements concerning school resources, like those for policy and organization, are likely to be a major influence on teachers' context beliefs.

Summary

The framework used in this study explains teachers' commitment to change as a function of personal goals, two types of personal agency beliefs and emotional arousal processes. Alterable variables giving rise to commitment are conceptualized as a set of eight in-school and out-of-school conditions as well as seven dimensions of transformational leadership practices. Based on this framework, the study asked three questions: (1) How much of the variation in teachers' commitment to change is explained by the direct and indirect effects of in-school and out-of-school conditions and transformational school leadership? (2) How does the contribution to teachers' commitment by transformational school leadership compare with the contribution of in-school and out-of-school conditions? (3) What is the nature and size of the contribution to teachers' commitment of each of the dimensions of transformational school leadership?

Method

Instruments

Staff members in nine secondary schools were surveyed for their perceptions of conditions affecting their school improvement efforts. The 217-item instrument developed for collection of survey data was adapted from instruments used in our previous research on school improvement efforts in other educational jurisdictions. The instrument was divided into two sections, administered approximately six weeks apart. Several variables addressed in the survey were not relevant to the framework of this paper and are not reported here. The 131 items used for our analysis were distributed among constructs in our model (Figure 1) as follows:

- Out-of-school processes and conditions - 18 items;
- Leadership practices - 47 items;
- In-school processes and conditions - 48 items; and
- Teacher commitment - 18 items.

Sample

The nine schools in this study were located within the same large urban school district consisting of more than 140 schools, of which 32 were secondary schools, with approximately 1700 teachers and 26, 000 students. Schools varied greatly in the socioeconomic and ethnic backgrounds of their students. Student enrollment in the nine schools ranged from about 550 to almost 1700 (mean=1059.8) with a corresponding range in staff size from about 40 to 120 (mean=86.6). The nine schools were nominated for this study by district-level personnel in response to our request for access to secondary schools engaged in significant school improvement efforts. A total of 168 teachers in the nine schools responded to both questionnaires, primarily those teachers directly involved in one or more of the change efforts around which our study focused in each school (we were not able to precisely estimate the total number of staff in each school actively involved in the schools' "official" change initiatives). Virtually all respondents (91%) were engaged in implementation efforts related to their school improvement goals. Seven per cent were vice principals , the remainder were classroom teachers and department heads. Respondents were primarily experienced educators with only 11% reporting fewer than 11 years experience and 44% reporting more than 20 years. Their experience was reflected in the age distribution. Sixty percent were in their forties and 29% older than 49. Forty-five percent of the respondents were female.

Data Analysis

Following data entry and cleaning, a single data file was compiled for the 168 respondents for whom there were data for both collection periods. SPSSX was then used to calculate means, standard deviations, percentages and correlation coefficients. The reliabilities (Cronbach's alpha) of the scales measuring all variables in our model were calculated on all the constructs.

The individual respondent was chosen as the unit of analysis for several reasons. First, individual perceptions were the basis for measuring all variables in the study and, with respect to these variables, we had no defensible reason for assuming that the school provided a common source of influence on individuals' perceptions: large secondary school cultures have been described as "balkanized" (Hargreaves &

Macmillan, 1991), for example, and their goals relatively diverse as compared with elementary schools (Rossman, Corbett, & Firestone, 1985). A second and related reason for using individual respondents as the unit of analysis was evidence that leadership, a key variable in this study, was widely dispersed in the view of respondents. In answer to questions on the surveys concerning sources of leadership for change, principals were identified by 55% of respondents, vice principals 39%, administrative teams 57%, administrative teams and department heads 51%, administrative teams and teachers 27%, ad hoc teacher committees 43% and individual teachers 34%.

Path analysis was used to examine the relationships among transformational school leadership, in-school and out-of-school conditions and teacher commitment to change. This technique allows for testing the validity of causal inferences for pairs of variables while controlling for the effects of other variables. Data were analyzed using the LISREL VI analysis of covariance structure approach to path analysis and maximum likelihood estimates (Jöreskog & Sörbom, 1989). Using LISREL, path models can be specified and the influence of exogenous variables (corresponding to independent constructs) on endogenous variables (corresponding to dependent constructs) influenced by other variables in the system can be estimated. Parameters (regression coefficients) can be estimated to assess the extent to which specified relations are statistically significant. Limitations on the meaningfulness of parameters are offset by the extent to which models can be shown to fit the data. A given model is said to fit the data if the pattern of variances and covariances derived from it does not differ significantly from the pattern of variances and covariances associated with the observed variables. Two criteria were used to determine the adequacy of the models' fit to the data: an adjusted goodness of fit index (AGFI) (acceptable above .80) and a ratio of chi-square to degrees of freedom less than 4.

Results and Discussion

Results of the study are reported in three parts. First, descriptive statistics are reported for each set of survey questions used to measure the variables in our model of teachers' commitment to change. Second, results of testing the teachers' commitment model using path analysis are presented. Finally, a summary is provided of answers to the three questions raised by the study.

Descriptive Statistics

Table 1 reports the mean ratings and standard deviations of responses for each set of items on the survey used to collect data for the study. Also reported are the reliabilities (Cronbach's alpha) of each of the scales measuring variables within the four constructs of the model that was tested for explaining secondary school teachers' commitment to change.

[insert Table 1 here]

Mean rating of the scales fall between 3.11 and 3.70. Scale reliabilities are all quite high with the expection of the out-of-school variable *Ministry* (Cronbach's alpha=.61).

Path Analysis

Figures 2, 3 and 4 display the three path models resulting from LISREL analyses of our data. Model one, depicted in Figure 2, fit the data perfectly (GFI=1.00). The goodness-of-fit index for model two (Figure 3) is .990, also a very good fit. Model 3 did not fit the data as well as did models 1 and 2. However, with a GFI of .944, an AGF of .848 and a CHI^2 of 66.31 (42 d.f.) the model is still marginally acceptable. Table 1 reports the correlation coeffecients used in the path analyses.

[insert Table 2 here]

For readers unused to the interpretation of such path models, we offer a brief explanation. The numbers beside lines joining constructs in the models are regression coefficients. They indicate the relative strength of the direct "effects" of one construct or variable on another. Statistically significant coefficients are noted with an asterisk (*). Numbers in brackets (e.g., (.72)) indicate the amount of variation in the construct, to which the accompanying arrow points, unexplained by the effects of the variables with which it is associated. A variable may have combined indirect and direct effects ("total effects"). Table 3 reports such total effects of variables in the first model (Figure 2) on teachers' commitment to change treated as a composite variable; this table also indicates the effects of the three variables making up the composite commitment construct on one another, as indicated by the second model (Figure 3). Total effects for model 3 are reported in Table 3.

[insert Figure 2 here]
[insert Table 3 here]

The first model explains 41% of the variation in teachers' commitment to change. This is an important but moderate proportion of explained variation. It suggests that variables not included in the model, perhaps those referred to initially as "unalterable", also contribute significantly to teachers' commitment. In-school conditions and transformational school leadership have significant direct effects on teachers' commitment whereas out-of-school conditions do not. However, as Table 3 (second column from left) indicates, the total effects of all three of these composite constructs on teachers' commitment are significant and of a similar order of magnitude (leadership=.46; out-of-school conditions=.44; in-school conditions=.39).

Although not reported in Figure 2 or Table 3, we tested a model with the three variables (Ministry, District, Community) making up the composite out-of-school construct considered independently (CHI^2 = 9.90, 12 d.f.; GFI=.985; AGF=.956). The direct effect of the Ministry on in-school conditions and school leadership was insignificant, as was its total effect on teachers' commitment. The community and district had significant effects of a similar magnitude on school leadership (.31 and .33 respectively): effects of both these variables on in-school conditions were also significant but much stronger in the case of the district (.34) as compared with the community (.16). Total effects of district and community variables on the three teacher commitment variables were moderate but significant. Regression coefficients ranging from .19 to .29 were about half the size of regression coefficients between both in-school conditions and school leadership and the three teacher commitment variables (.38 to .47).

The second path model, depicted in Figure 3, examines separately the three variables making up the composite teachers' commitment construct. This model suggests that capacity beliefs are not directly influenced by in-school and out-of-school conditions or school leadership. Personal goals are directly influenced by school leadership (.29) and by in-school conditions (.38) but there remains considerable unexplained variation (.62). Context beliefs are directly and strongly influenced by personal goals (.76) and directly but modestly influenced by in-school conditions (.16); in combination, these two variables explain a substantial amount of the variation in capacity beliefs. Personal goals have modest (.26) and context beliefs strong (.64) direct effects on capacity beliefs (75% of variation explained).

[insert Figure 3 here]

The third path model (Figure 4) unpacks school leadership and in-school conditions, examining separately the variables within each. The significant direct effects of leadership on teachers' commitment appears to be accounted for by leadership practices concerned with vision. A reasonable inference is that vision-building activities have direct effects on teachers' personal goals. The direct effects of in-school conditions on teachers' commitment are due to just two in-school conditions - teachers' perceptions of school goals and school culture. Also a reasonable inference is that the effects of in-school conditions on teachers' context beliefs, evident in model two, are accounted for largely by teachers' perceptions of school culture (collegial, supportive and the like). Four dimensions of transformational school leadership have direct effects on these two in-school conditions. These include holding high performance expectations, developing consensus about group goals, providing intellectual stimulation and offering contingent reward. As Table 4 indicates however, only vision-building activities and developing consensus about group goals have significant total effects on teachers' commitment to change.

[insert Figure 4 here]
[insert Table 4 here]

Answers to the Research Questions

What responses are provided by these analyses to the three questions with which we began this study? The first question asked about how much variation in teachers' commitment to change is explained by the effects of in-school and out-of-school conditions and school leadership. The simplest answer, evident from the first path model, is about forty percent. Alterable variables not included in the model, unalterable variables (e.g., gender, age) and measurement error likely account for the remaining sixty percent. The second path model provides a more complex version of this answer. When the three teacher commitment variables are unpacked, it appears that the alterable variables in our model still account for about 40% of the variation in teachers' personal goals. But personal goals have very strong direct effects on context beliefs and weaker but significant effects on capacity beliefs. This more complex answer to the first question recommends primary attention to teachers' personal goals in efforts to foster commitment to change.

The second question raised by the study concerned the relative influence on teachers' commitment to change of transformational school leadership, as compared

with the other potential sources of influence included in our model. The simplest answer to this question is provided by the estimates of total effects on teacher commitment reported in Table 3. The total effects of transformational leadership are marginally but consistently greater than the total effects of in-school and out-of-school conditions. This is the result when commitment is treated as a composite, as well as when the three variables making up that composite are considered separately (Tarter, Hoy and Bliss, 1989, found that the leadership of the principal explained a third of the variance in teachers' organizational commitment). And beyond simply noting that transformational school leadership is "the winner by a neck", in response to our second question, the second path model adds an important refinement to this answer. The effects of transformational school leadership are both indirect and direct, the direct effects impacting primarily on teachers' personal goals.

A final question addressed by the study concerned the relative contribution to teachers' commitment of each of the seven dimensions of transformational school leadership. Model three (Figure 4) identified direct or indirect effects on teachers' commitment of five of these seven dimensions. *Providing models* and *individualized support* were the only two apparently making no contribution to teachers' commitment. Table 4, however, shows significant total effects on teachers' commitment of only two transformational leadership dimensions - building a vision of the school and developing a consensus among staff about goals for the school.

Conclusions and Implications

Teachers' commitment to change was conceptualized in this study as a function of teachers' personal goals as well as their context and capacity beliefs. Emotional arousal processes, although also part of this conception, were not measured by the study. This motivation-based conception of commitment overlaps with but is importantly different than the meanings typically associated with organizational commitment (Tarter, Hoy, & Bliss, 1989; Mowday, Steers, & Porter, 1979), commitment to student learning (Kushman, 1992; Ashton & Webb, 1986), teacher engagement (Chase, 1992; Johnson, 1990; Louis & Smith, 1991), and teacher job satisfaction (Anderman, Belzer, & Smith, 1991; Bryk & Driscoll, 1988). These distinctions are not trivial. For example, there is some evidence of an inverse relationship between organizational commitment and commitment to change on

the part of private-sector managers (Stevens, Beyer, & Trice, 1978). At least conceptually, then, commitment to change ought to be a more powerful predictor of teachers' responses to school change initiatives than these other psychological states which, although intuitively or semantically similar, give rise to quite different behaviors.

Our study of influences on teachers' commitment to change was guided by a model of alterable variables classified as out-of-school conditions, in-school conditions and transformational leadership practices. Each class of variables appeared to exercise a significant influence on teachers' commitment. Especially strong as influences were the vision-creating and goal consensus-building practices of school leaders. These practices made their greatest contribution to the motivational conditions associated with teachers' personal goals: such goal-related conditions, in turn, were significantly related to teachers' context and capacity beliefs. In sum, the dimensions of leadership practice contributing most to teachers' commitment to change were those which helped give direction, purpose and meaning to teachers' work. This pattern of results seems to be consistent with self-concept based explanations of transformational leadership: Shamir (1991) argues:

> ... such leaders increase the intrinsic value of effort and goals by linking them to valued aspects of the followers' self-concept, thus harnessing the motivational forces of self-expression, self-consistency, specific mission-related self-efficacy, generalized self-esteem and self-worth (p. 92).

Implications for Practice

Two implications for practice are especially worth highlighting, one concerning the role of district staff, the other school culture-building strategies. Teachers' commitment to change is subtly but significantly influenced by district-level conditions. Given such effects, it seems important for those outside the school, primarily district staff, to consider as an important part of their work, directly fostering those conditions in the school associated with teachers' commitment. An inspiring district mission, developed with the advice of all district stakeholder groups, for example, is likely to provide a useful point of departure for staffs in clarifying goals for themselves and their school. A collaborative district culture is likely to make it much easier for school staffs to move toward a more collaborative school culture creating, in turn, context beliefs supportive of school restructuring initiatives. Firestone and Rosenblum (1988) identified the provision of adequate

buildings, curriculum materials and curriculum alignment as district conditions also likely to foster what the present study viewed as positive teacher context beliefs.

It seems evident, as well, that district staff have an important contribution to make toward the development of those aspects of transformational school leadership that are commitment-building for teachers. This might include, for example, providing opportunities for principals to learn about how to create compelling school visions with their staffs and how to develop staff consensus around specific goals for school restructuring. Less obviously, district staffs might also allow themselves to be more visibly influenced in their directions and actions by school leaders: Tarter, Hoy and Bliss' (1989) data demonstrated that principals foster teacher commitment only when their influence with superordinates is perceived by teachers to be high.

The second implication for practice is about culture-building. Conditions in the school, as teachers interpret them, have the strongest direct effects on teachers' commitment to change. Our study draws attention, in particular, to how defensible are the school's goals in the minds of teachers, as well as how compatible are such goals with teachers' own personal/professional goals. Also crucial, however, are teachers' views of the school culture, a finding parallel to results reported by Anderman, Belzer and Smith (1991), although their definition of culture is broader than ours: these results, of course, ought not to be surprising in light of the growing evidence about the importance of school culture (e.g., Little, 1982; Hargreaves et al, 1993). Nevertheless, current school leaders have had available almost no credible advice about how to build productive school cultures until recently.

This suggests the need for school leaders, first of all, to consciously attend to the content, strength and form of their schools' culture. When aspects of that culture appear not to support conditions giving rise to teachers' commitment to change, school leaders should make use of those culture changing strategies which are now becoming evident in recent research (e.g., Deal & Peterson, 1990; Leithwood & Jantzi, 1990). These strategies include, for example: selecting staff whose values reflect those considered important to the school; telling stories that illustrate shared values; using symbols and rituals to express cultural values; and sharing power and responsibility with others.

Implications for Theory and Research

Three implications for theory and research also seem evident in the results of the study, one following directly from the prior discussion of school culture and one concerning leadership practices aimed at providing individualized support to teachers. The third has to do with research method and design. First, although culture-building seems an important avenue through which to foster teachers' commitment to change, leadership practices designed for that purpose are, at best, an implicit part of most current conceptions of transformational leadership. This suggests the addition of an explicit (eighth) dimension of transformational leadership with school culture-building as its focus.

Second, the effects of transformational school leadership on teachers' commitment to change were largely due to the *vision-building* and *goal consensus* dimensions of transformational leadership. Both of these dimensions involve the establishment of directions for school initiatives that meet the motivating conditions associated with teachers' personal goals. Notable by its absence in these results, however, was any role for the dimension of transformational leadership called *providing individualized support*. This is notable because of the impressive amount of recent evidence arguing for the importance of a significant array of leadership practices readily classed as *providing individualized support* (e.g., Kushman, 1992; Chase, 1992; Firestone & Rosenblum, 1988; Tarter, Hoy & Bliss, 1989; Goldman, Dunlap & Conley, 1993; Blase, 1989).

Why do our results seem to differ? Perhaps teachers' commitment to change is influenced by different leadership practices than are other forms of commitment - like psychological states. Perhaps it is a peculiar anomaly of this set of data that will not be replicated in follow-up studies. Perhaps it is a function of the data analysis techniques we used. Whatever the case, this study is by no means the end of the story. Clearly, developing teacher commitment to change is an important goal in school restructuring. Clearly, teacher commitment to change can be intentionally developed. And clearly, school leaders have a role in developing such commitment. Beyond that, as they say, further research is needed.

Finally, it is important to acknowledge the limitations in the design of this study and the possibility that our results will be challenged by subsequent work. For example, the sample of teachers included in the study was relatively small and heavily skewed in terms of age and experience. Quite aside from the value of larger samples, it will be important in subsequent research to better represent teachers in

the early and middle stages of their careers. Further, although the model of teachers' commitment guiding the present study had the virtue of focusing on alterable influences, the amount of unexplained variance evident in our results warrants adding to this model, for subsequent research, those unalterable influences identified in previous research (e.g., gender, subject assignment). As well, this study was unable to include a measure of emotional arousal processes as part of teachers' commitment to change, even though our conception of such commitment indicated its importance; this is a deficiency that should be rectified in further tests of teachers' commitment to change.

Teachers' commitment to change cannot be fully explained, by any means, by the "alterable variables" most evident in the research literature at the present time. To the extent that these alterable variables are represented in the model framing this study, however, they do account for an educationally as well as statistically significant proportion of the variation in teachers' commitment to change. As a consequence, at least part of the problem of school restructuring should be defined as creating the conditions giving rise to teachers' commitment to change. It appears to be a solvable problem. And transformational leadership practices appear to be part of the solution.

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Table 1

Out-of-School Conditions, Leadership Dimensions, In-School Conditions and Teacher Commitment: Descriptive Statistics

	Mean (1 - 5)	S. D.	Cronbach's Alpha
Out-of-school composite	3.38	.53	.68
Ministry	3.45	.70	.61
District	3.42	.64	.78
Community	3.26	.70	.84
Leadership composite	3.52	.70	.97
Vision	3.46	.72	.89
Provides models	3.57	.93	.77
Developing group goals	3.66	.72	.77
Individualized support	3.54	.79	.92
High performance expectations	3.38	.80	.65
Intellectual stimulation	3.46	.72	.89
Contingent reward	3.54	.89	.90
In-school composite	3.36	.48	.84
School goals	3.42	.64	.83
School culture	3.31	.64	.88
Program and instruction	3.70	.56	.81
Policy and organization	3.24	.54	.61
Resources	3.11	.68	.76
Teacher commitment composite	3.57	.68	.94
Personal goals	3.57	.80	.90
Context beliefs	3.51	.73	.91
Capability beliefs	3.64	.62	.85

Table 2

Out-of-School Conditions, Leadership Dimensions, In-School Conditions and Teacher Commitment: Correlation Coefficients

A. Composite Variables and Commitment Components

		1	2	3	4	5
1.	Out-of-school					
2.	Leadership	.53				
3.	In-school	.65	.71			
4.	Personal goals	.42	.56	.59		
5.	Context belief	.45	.57	.60	.85	
6.	Capacity belief	.39	.46	.53	.80	.85

B. Leadership, in-school conditions and outcome variables

		1	2	3	4	5	6	7	8	9	10	11	12
1	Vision												
2	Models	.80											
3	Group goals	.83	.73										
4	Support	.88	.78	.88									
5	Stimulation	.79	.71	.80	.80								
6	Expectations	.67	.61	.62	.59	.67							
7	Reward	.82	.79	.78	.85	.77	.60						
8	School goals	.70	.58	.72	.70	.69	.64	.58					
9	School culture	.58	.53	.64	.60	.65	.54	.58	.72				
10	Program	.43	.29	.45	.37	.38	.42	.35	.45	.50			
11	Policy	.51	.43	.45	.49	.43	.38	.41	.51	.47	.55		
12	Resources	.47	.36	.39	.45	.45	.39	.38	.49	.45	.38	.65	
13	Commitment	.57	.42	.55	.55	.55	.44	.47	.60	.62	.33	.38	.43

Table 3

Total Effects of Independent Variables on Teachers' Commitment to Change

	Commitment (Composite)[1]	Personal Goals[2]	Context Beliefs[2]	Capacity Beliefs[2]
Out-of-School	.44*	.40*	.40*	.36*
In-School	.39*	.38*	.44*	.38*
Leadership	.46*	.49*	.45*	.41*
Personal Goals	---	---	.76*	.74*
Context Beliefs	---	---	---	.64*

1 Based on model in Figure 2

2 Based on model in Figure 3

Table 4

Total Effects of Leadership Dimensions and In-School Conditions on Teachers' Commitment to Change

Leadership and In-School Conditions	Commitment
Vision	.26*
Developing group goals	.20*
High performance expectations	.11
Intellectual stimulation	.07
Contingent reward	.04
Provides models	.00
Individualized support	.00
School Goals	.34*
School culture	.35*

Figure 1

A model for explaining the development of teachers' commitment to change

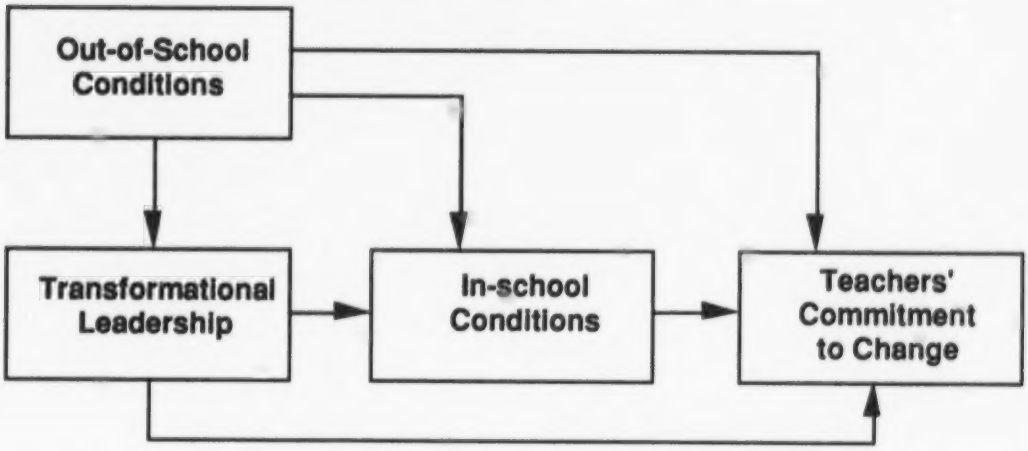


Figure 2

Test of model for explaining variation in teachers' commitment to change: Composite variables

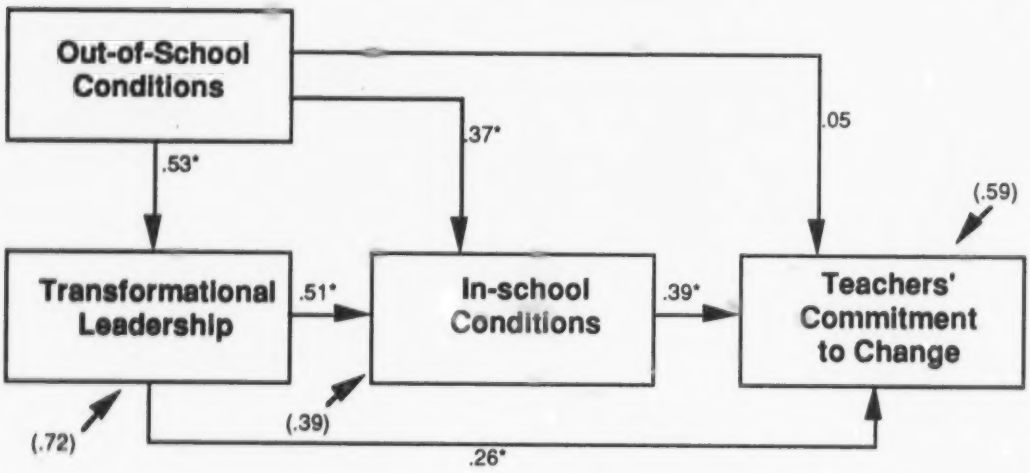
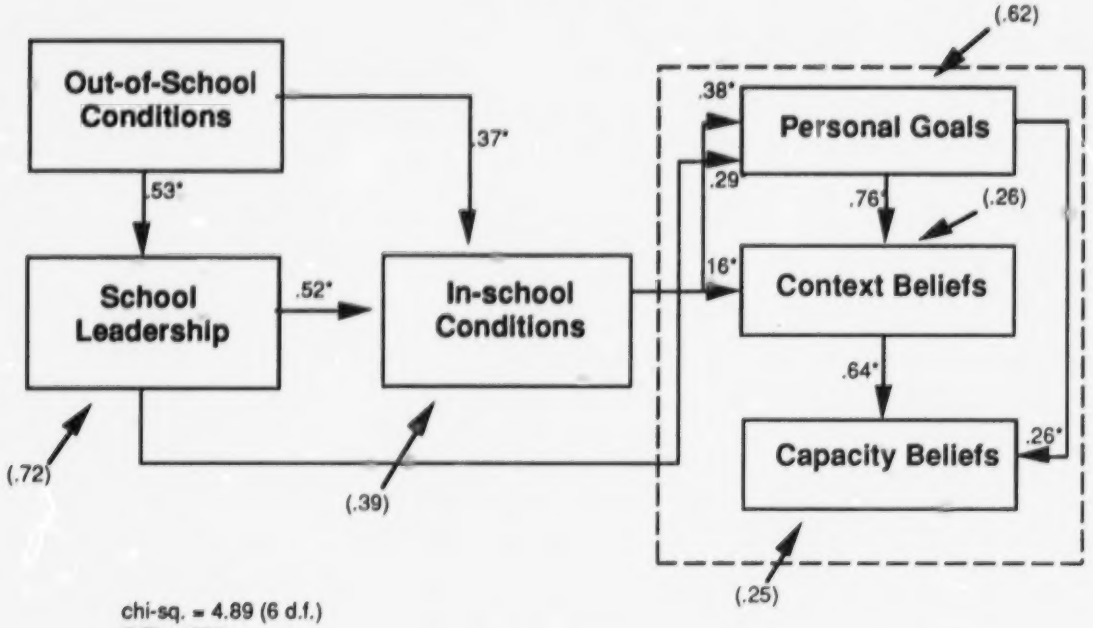


Figure 3

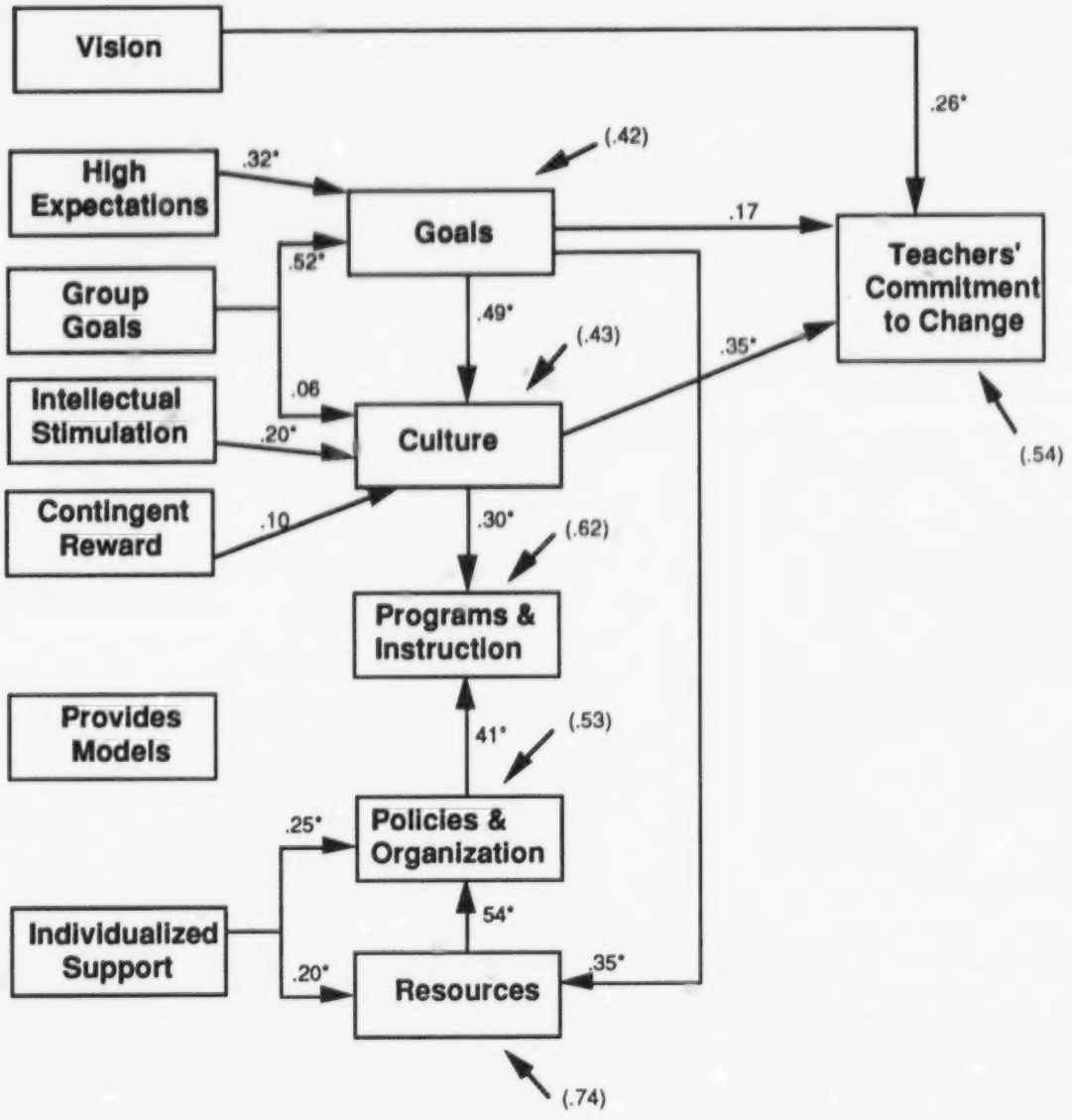
Test of model for explaining variation in teachers' commitment to change: Personal goals, context beliefs and capacity beliefs



chi-sq. = 4.89 (6 d.f.)
GFI = .990
AGF = .966

Figure 4

Test of model for explaining variation in teachers' commitment to change: Transformational leadership dimensions



Chi-sq. = 66.31 (42 d.f.)
GFI = .944
AGF = .878